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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,308	07/20/2000	Joseph Drori	08991-031001	2491

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Townsend & Townsend & Crew LLP
Two Embarcadero Center, Eighth Floor
San Francisco, CA 94111-3834

EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2637

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

8m

Office Action Summary	Application No.		Applicant(s)	
	09/620,308		DRORI, JOSEPH	
	Examiner		Art Unit	
	Jean B Corrielus		2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-19 and 22-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-17, 19, 22 and 23 is/are allowed.
- 6) ☒ Claim(s) 2-9, 18, 24 and 26-28 is/are rejected.
- 7) ☒ Claim(s) 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claim 18 is withdrawn in view of the newly discovered reference(s) to Taylor et al US Patent No. 4,333,149. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 18 and 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kannan et al US Patent No. 5,423,045 in view of Snow US patent No. 6,546,434 and further in view of Taylor US patent No. 4,333,149.

As per claim 18, Kannan et al discloses a method and apparatus comprising the steps of receiving a sequence of pulses (8 bits of data pulse) from a serial port see col. 28, lines 35 and 49-55, inherently consistent with a serial protocol; interpreting the bits of data pulses received according to the serial protocol wherein the serial protocol defines a set of battery management commands (i.e. power off, clear power disruption flag, clear charge fault etc...) based on at least the number of pulse in the sequence (number of bits) see col. 28, lines 51-col. 29, line 37; the commands are transmitted from the service

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processor 264 to control the battery unit see col. 28, lines 35-col. 29, line 37. However, Kannan does not teach that the serial port includes a single conductor it also fails to teach that the commands includes read/write commands arithmetic commands and interrupt commands. However, implementing a serial interface using a single conductor is old and well established in the art. For instance Snow teaches an interface having a single conductor. See col. 3, line 66-col. 4, line 9. It would have been obvious to one skill in the art to incorporate such a teaching in Kannan et al so as to minimize cost to implement the system since the need for a different connector to send a clock signal would be eliminated. Furthermore, Taylor teaches a series of commands such as interrupt read/write and arithmetic commands see fig. 2 and col. 5, lines 19-35. Given that fact, it would have been obvious to incorporate such a teaching in Kannan and Snow in order to control efficiently the operation of the battery management.

As per claims 2, 3, 8 and 9, it would have been obvious to one skill in the art to set the pulse width of each pulse the same and/or to set the time duration between signals to at least two times longer than a width of a pulse an/or to set each pulse in the sequence to a low or high level for a same time interval in order to satisfy system coding requirements.

As per claims 4-7, it would have been obvious to one skill in the art to map the signals in such a way that a zero signal would represent two pulses or a one signal would represent a sequence of three pulses or an ACK signal would represent a sequence of four pulses or a start sequence would represent a sequence of five pulses, in order to satisfy requirements of the selected mapping or coding protocol.

Claim Rejections - 35 USC 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Armstrong et al US Patent No. 5,432,429.

As per claim 26, Armstrong et al discloses a battery management circuit comprising an interface unit see signal lines 14-22 configured to receive battery management commands including memory read and write commands and further configured to receive memory addresses and write data see fig. 1, and fig. 4; a memory 36 for receiving memory write commands, memory addresses and write data from the interface unit and further configured to store the write data at the memory addresses received from the interface unit see fig. 1.

As per claim 28, the interface control unit (signal lines 14-22) is further configured to provide read data see fig. 2, 54, and the memory 36 is configured to receive the memory read command from the interface (14-22) and to retrieve the read data from the memory addresses receive from the interface see fig. 1 and fig. 2.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gates US Patent No. 6,516,366.

Gates discloses an apparatus (fig. 3) comprising a serial interface 341 consisting of a single conductor (SPIO) see fig. 3; a controller 210 configured to provide and accept

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commands and a serial interface circuit coupled to the serial port 341 and a controller 210. Configured to accept commands from the controller and to provide signals for transmission to the serial port and accept signals from the serial port and provide commands to the controller 210. However, Gates et al does not teach that the circuit is battery management circuit. It would have been obvious to one skill in the art to implement Gates as a battery management circuit in order to manage battery operation.

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong et al in view of Snow US Patent No. 6,546,434.

As applied to claim 26 above, Armstrong et al discloses every feature of the claimed invention but does not explicitly teach that the serial port includes a single conductor to receive the battery management commands, memory addresses and write data. However, implementing a serial interface using a single conductor is old and well established in the art. For instance, Snow teaches an interface having a single conductor. See col. 3, line 66-col. 4, line 9. It would have been obvious to one skill in the art to incorporate such a teaching in Armstrong et al so as to minimize cost to implement the system since the need for a different connector to send a clock signal would be eliminated.

Allowable Subject Matter


8. Claim 25 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claims 10-17, 19, 22 and 23 are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on Maxi-Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jean B Corrielus
Primary Examiner
Art Unit 2637
5/28/05